User Manual

Industrial Gigabit
5/6-Port Ethernet Switch

v1.0

FCC MARKING

This Equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications.
Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.
This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received; including interference that may cause undesired operation.

CE MARKING

This equipment complies with the requirements relating to electromagnetic compatibility, EN 55022 class A for ITE, the essential protection requirement of Council Directive 2004/108/EC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

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(P/N: 41NE-ISG42100-A00)

Introduction

This rugged designed Industrial Ethernet switch has passed many rigorous environmental test. It comes with optional SFP port to extend your network scale to a much larger area. With its multi-purpose design, it can be used for Din-Rail or wall-mounted. It is an ideal unit for IP surveillance, traffic monitoring and Security application in critical environment. It can tolerate -40°C to 75°C in harsh environment to perform a reliable network.

Key Features

- RJ-45 port support Auto MDI/MDI-X Function
- SFP port supports 100Base-FX and 1000Base-X speed
- Store-and-Forward Switching Architecture
- Back-plane (Switching Fabric): 12Gbps
- 1Mbits Memory Buffer
- 1K MAC Address Table
- Power Polarity Reverse Protect
- With Overload Current Re-settable Fuse
- Provides broadcast storm protection
- IP-30 Protection
- DIN Rail and Wall Mount Design

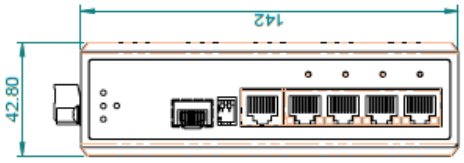
Package Contents

- 1 x Industrial Switch
- 1 x User Manual
- 1 x 3 pin Terminal Block
- 2 x Wall Mounting Bracket and and 4 x Screws
- 1 x Din Rail Bracket

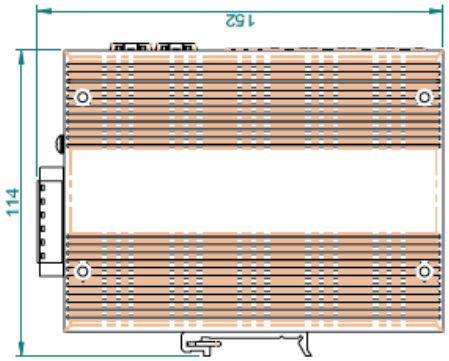
Compare the contents of the industrial switch with the standard checklist above. If any item is damaged or missing, please contact the local dealer for service.

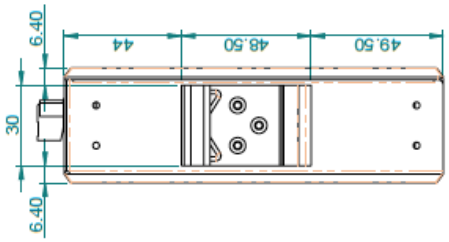
Physical Dimension

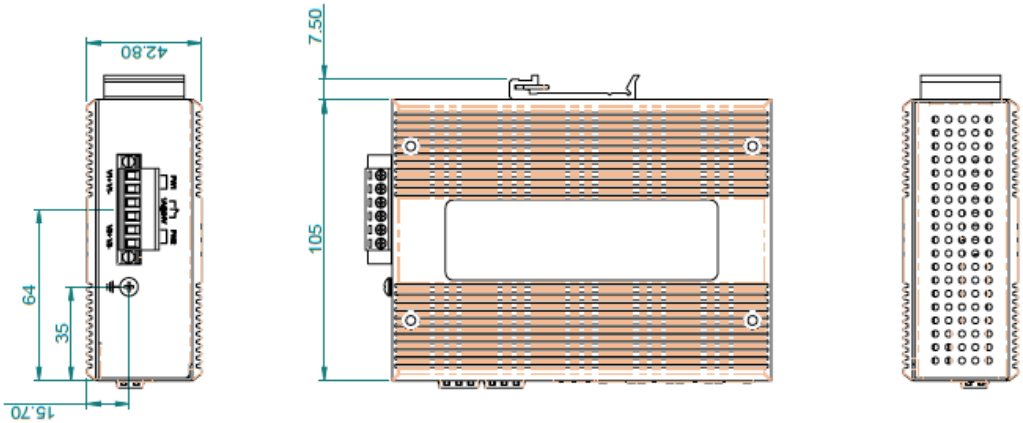
- 5-ort



- 6-Port







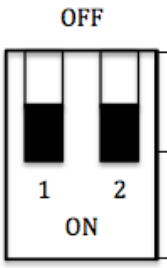
LED Indicators

For definitions of LED indicators, please refer to the following table:

LED	Status	Indication
PW1	Green	when V1+, V1- is connected
	Off	Power is off
PW2	Green	when V2+, V2- is connected
	Off	Power is off
ERR	Amber	connect only PW1 or PW2.
	OFF	both PW1 and PW2 are connected
LNK	Green	TX link is detected
	OFF	TX port is not detected
	Flashing	TX port is active
SPD	Green	1000M speed is detected
	OFF	10M or 100M speed is detected
F5	Green	port 5 SFP fiber is detected
	OFF	port 5 SFP fiber is not detected.
	Flashing	port 5 SFP fiber is active
F6	Green	port 6 SFP fiber is detected
	OFF	port 6 SFP fiber is not detected.
	Flashing	port 6 SFP fiber is active

Dip switch function

This unit is equipped with dip switches, located on the front panel. Adjusting the dip switches will change the default function of this unit. This unit has set to manufacturer default as: Port 5 SFP and the speed is set to 1000M for both port 5 and port 6 SFP ports. you may adjust dip switch setting to select port 5 as TX (disable port 5 SFP) or set SFP speed to 100M. The detail setting as shown below:



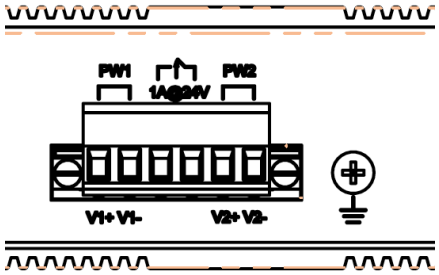
DIP 1 to select port 5 TX or SFP	ON	TX
	OFF	SFP (default)
Dip 2 to select SFP speed	ON	100M
	OFF	1000M(default)

Warning:

Dip switch function will not work if it is changed when power is connected. Always turn off or disconnect power supply to change dip switch settings.

Power connection

This industrial switch comes with a 6 pin terminal block. It can be operated from 9-56VDC power source. Always Make sure your input voltage is within this supported voltage range for each model.



WARNING:
Any exceeded input voltage will not make this unit function and may damage this unit.

To make power connection –
Follow the printed polarity for V1+, V1-, V2+, V2-, and ground. Connect positive wire to V+ , connect negative wire to V-, also connect neutral wire to the ground screw as shown .

Relay –
You may use 24V@1A relay connection to your external device for special purpose. When 2 powers are connected, the relay is in SHORT mode. When any power source fails, the relay change to OPEN status.

Power connecting procedure:
STEP 1 – Pull out 6 pin terminal block.
STEP 2 – Connect wire to V1+, V1-, or V2+, V2-, and Ground the neutral wire to the ground screw.
STEP 3– Plug back 6 pin terminal block to its place.

WARNING:
Always ground the power source to maintain a clean power input. Due to too many cheap made power supplies, it creates too much noise, and it will cause the power input fluctuates when connect to this unit. To avoid this, always ground the power source to gain a clean power input.

Specification

IEEE Standard	IEEE 802.3 10Base-T Ethernet IEEE 802.3u 100Base-TX Fast Ethernet IEEE 802.3ab 1000Base-T Gigabit Ethernet IEEE 802.3z 1000Base-X Gigabit Ethernet IEEE802.3x Flow Control and Back Pressure
Switch Architecture	Back-plane (Switching Fabric): 12Gbps
Data Processing	Store and Forward
Flow Control	IEEE 802.3x Flow Control and Back Pressure
Jumbo Frame	9KB
MAC address Table Size	1K
Packet Buffer Size	1Mbits
Network Connector	5-Port: 4xRJ-45 10/100/1000BaseT(X) auto negotiation, Auto MDI/MDI-X function, Full/Half duplex 1x SFP 100/1000M BaseX, combo with1x10/100/1000M TX 6-Port: 4xRJ-45 10/100/1000BaseT(X) auto negotiation, Auto MDI/MDI-X function, Full/Half duplex 1x SFP 100/1000M BaseX, combo with1x10/100/1000M TX 1x SFP 100/1000M BaseX
Network Cable	UTP/STP above Cat.5e Cable EIA/TIA-568 100-ohm (100m) Fiber Cable (Multi-mode):50/125um,62.5/125um Fiber Cable (Single-mode): 9/125um
Protocol	CSMA/CD
LED	PW1(Power 1) Green, PW2(Power 2) Green, ERR(Fault) Amber, TX/RJ-45 port: LNK (Link/Active) Green, SPD(Speed) 10/100(OFF) ,1000 (Green) SFP Fiber Per port: Link (Green) Active Flash
DIP Switch	DIP 1: OFF: Port 5 SFP (DEFAULT) ON: Port 5 TX DIP 2: OFF: SFP 1000M (DEFAULT) ON: SFP 100M
Reserve polarity protection	Present
Overload current	Present

protection	
Power Supply	Redundant Dual DC 9V-56V Power Input
Power Consumption	5.76W@12/24/48 VDC full load,
Alarm Relay Contact	Relay outputs with current carrying capacity of 1 A @24VDC, Relay in short circuit mode when 2 powers are connected. in open circuit mode when only one power supply is connected
Removable Terminal Block	Provide 2 Redundant power ,Alarm relay contact ,6 Pin Wire range: 0.34mm^2 to 2.5mm^2 Solid wire (AWG):12-24/14-22 Stranded wire(AWG): 12-24/14-22 Torque:5lb-In/0.5Nm/0.56Nm Wire Strip length: 7-8mm
Operating Temperature	-40℃~75℃ fully tested.
Operating Humidity	5% to 95% (Non-condensing)
Storage Temperature	-40℃~85℃
MTBF (mean time between failure)	510,304 hrs (MIL-HDBK-217F) at 25°C
Housing	Rugged Metal ,IP30 Protection
Case Dimension (L x W x D)	142mmx43mmx105mm (LxWxD)
Installation mounting	DIN Rail mounting and Wall Mounting
Certifications: **EMC/EMS** **EMI** **EN 50155 / EN 60068-2-6** **EN 50155 / EN 60068-2-27** **EN 50155 / EN 60068-2-32**	 CE, FCC, VCCI FCC Part 15 Subpart B Class A, CE EN 55022 Class A Vibration Shock Free Fall